

II. Rejection under 35 U.S.C. § 102(b)

The Examiner rejects claims 1-5, 7-11, 18-19, 21, 25-26, 29, 32-34 and 37-41 under 35 U.S.C. § 102(b) “as being anticipated by Helioff et al.” (U.S. Patent No. 4,793,994) (“*Helioff*”). Office Action at 2. In particular, the Examiner states that *Helioff* “teaches a hair treating compositions [sic] comprising ammonium hydroxide, a reducing agent of sodium bisulfite and a complexing agent of chelating agent as claimed in claims 1, 2, 40” *Id.* (citing *Helioff* at col. 5, lines 15-31). The Examiner continues asserting that *Helioff* contains the claimed elements of the rejected claims for the remainder of page 2 and half of page 3 of the Office Action. The Examiner concludes that *Helioff* “teaches all the limitations of the instant claims. Hence, Helioff et al., anticipates the claims.” Office Action at 3.

Applicants traverse for at least the reason that *Helioff* does not anticipate the present claims.

The Examiner essentially points to a table in *Helioff* entitled “Bisulfite Waving Formulation” as anticipating the present claims, but the disclosure of the table does not, in fact, anticipate. A claim is anticipated under 35 U.S.C. § 102(b) only if **each and every element** as set forth in the claim is found in a single reference. See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) and M.P.E.P. § 2131. Furthermore, the identical invention must be set forth in as complete detail as it appears in the claim. See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) and M.P.E.P. § 2131. *Helioff* does not anticipate the present invention because it does not disclose each and every element of the present claims.

Specifically, *Helioff* does not anticipate the present claims at least because it does not disclose “at least one reducing agent chosen from thiols, sulfites, and derivatives thereof; and .

. . . at least one complexing agent **effective for dissociating the at least one hydroxide compound in a sufficient quantity to effect lanthionization** of keratinous fibers, **wherein said at least one hydroxide compound and said at least one reducing agent are present in a combined amount effective to relax keratinous fibers**” See, e.g., Claim 1 (emphasis added).

First, *Helioff* does not teach that the listed “chelating agent” is effective for dissociating the at least one hydroxide compound in a sufficient quantity to effect lanthionization of keratinous fibers, as claimed. As explained in “Milady’s Hair Structure and Chemistry Simplified” by Douglas D. Schoon, pages 191-192 (“*Schoon*”), cited in, and attached to, the Supplemental Information Disclosure Statement submitted herewith, lanthionization is the forming of a singly sulphur cross-linked bond, instead of two sulphur atoms forming a bridge. See *Schoon* at 192. As discussed in *Schoon*, one of skill in the art would know that “[l]anthionization also interferes with permanent wave procedures.” *Id.* In fact, it is impossible for the chelating agent as disclosed in the “Bisulfite Waving Formulation” table to dissociate the at least one hydroxide compound in a sufficient quantity to effect lanthionization of keratinous fibers because “[p]ermanent wave reducers cannot break lanthionine cross-link bonds,” and *Helioff* teaches a chelating agent with a reducer in a permanent waving solution. *Schoon* at 192. Accordingly the permanent waving formulation of *Helioff* cannot simultaneously teach a permanent waving solution and “at least one complexing agent effective for dissociating the at least one hydroxide compound in a sufficient quantity to effect lanthionization of keratinous fibers” as-claimed.

Second, *Helioff* does not teach that the “at least one hydroxide compound and said at least one reducing agent are present in a combined amount effective to **relax** keratinous

fibers,” as claimed. Rather, the table entitled “Bisulfite Waving Formulation” teaches waving, and not relaxing or straightening, compositions. Thus, the at least one hydroxide compound and reducing agent of *Helioff* are not taught in an amount effective to relax keratinous fibers, as they are taught in an amount effective for waving keratinous fibers. Moreover, *Helioff* does not teach that the “Bisulfite Waving Formulation” can be used for relaxing and/or straightening, but instead lists another formulation for hair straightening, which also does not teach every element of the presently claimed invention. See *Helioff*, column 6, lines 6-43.

Thus, *Helioff* does not disclose every element of the present disclosure, and cannot be said to anticipate the present claims. Accordingly, this rejection is in error and Applicants request its withdrawal.

III. Rejection under 35 U.S.C. § 103(a)

A. Claims 6, 22-23 and 36

The Examiner rejects claims 6, 22-23, 36 and 42 under 35 U.S.C. § 103(a) “as being unpatentable over *Helioff*.” Office Action at 3. Specifically, as in the rejection under 35 U.S.C. § 102(b) above, the Examiner asserts that *Helioff* “teaches an aqueous hair treating composition comprising 1.1% of ammonium hydroxide, a reducing agent of sodium bisulfite and a complexing agent of chelating agent as claimed in claim 1.” *Id.* (citing *Helioff* at col. 5, lines 15-31).

Referring to claim 6, the Examiner admits that “[t]he instant claims differ from the reference by optimizing the amount of the hydroxide compound in the composition.” Office Action at 4. However, the Examiner still makes the circular conclusion that

it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amount of the hydroxide compound in the composition because the reference

teaches a composition comprising 1.1% of ammonium hydroxide (see col. 5, line 22), and, thus, a person of ordinary skill in the art would be motivated to optimize the amount of the hydroxide compound in the composition with a reasonable expectation of success

Office Action at 4. In addition, referring to claims 22-23, the Examiner contends that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate a composition with full dissociation because the reference teaches an aqueous hair treating composition comprising similar ingredients to those claimed" *Id.* Finally, with respect to claim 36, the Examiner argues that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate a composition comprising a complexing agent and a hydroxide compound to form a complexing agent-counter ion complex . . ." *Id.* at 5.

Applicants respectfully traverse for at least the reason that the Examiner has not made a prima facie showing of obviousness. In order to establish a prima facie case of obviousness, the Examiner must show, among other things, that the reference teaches or suggests all of the claim limitations. See M.P.E.P. § 2143. As discussed above, *Helioff* does not teach or disclose all of the claimed elements of claim 1.

Thus, the Examiner has not and cannot establish a prima facie showing of obviousness with *Helioff* and the present claims. Accordingly, this rejection is in error and Applicants request its withdrawal.

B. Claims 12-17, 27 and 30-31

The Examiner rejects claims 12-17, 27, and 30-31 "under 35 U.S.C. § 103(a) as being unpatentable over *Helioff* . . . in view of *Au et al.*" (U.S. Patent No. 5,872,111) ("*Au*"). The Examiner admits that *Helioff* "does not teach or suggest at least one cationic exchange

component (thickeners) and the complexing agent chosen from disodium silicate and dipotassium silicate as claimed.” Office Action at 5. Thus the Examiner cites *Au* to cure the deficiencies of *Helioff*, and contends that *Au* “teaches a shampoo composition comprising clay material such as aluminum silicate as claims 12-14 . . . , zeolites and aluminosilicates as claimed in claims 15-17 . . . , tripotassium phosphates and sodium basic silicates . . . , and amino acids as claimed in claims 27 and 30-31. *Id.*

Applicants respectfully traverse for at least the reason that the Examiner has not made a prima facie showing of obviousness. In order to establish a prima facie case of obviousness, the Examiner must show, among other things, that the references teach or suggest all of the claim limitations. See M.P.E.P. § 2143. As discussed above, *Helioff* does not teach or disclose all of the claimed elements of claim 1.

Au cannot remedy the deficiencies of *Helioff* already demonstrated, and thus, a prima facie case of obviousness has not been established. Accordingly, this rejection is in error and Applicants request its withdrawal.

C. Claims 24 and 35

The Examiner rejects claims 24 and 35 under 35 U.S.C. § 103(a) “as being unpatentable over *Helioff* . . . in view of *Mathews et al.*” (U.S. Patent No. 4,816,246) (“*Mathews*”). The Examiner admits that *Helioff* “does not teach or disclose the specific species of the chelating agents as claimed.” Office Action at 6. Thus, the Examiner cites *Mathews*, contending that *Mathews*, “in analogous [sic] art of hair treating formulation, teaches a composition comprising chelating agents such as ethylene-diamine tetraacetic acid (EDTA).” *Id.* (citing *Mathews* col. 4, line 37). The Examiner concludes that “in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made

would be motivated to modify the primary reference of *Helioff* . . . by incorporating the chelating agent ethylene-diamine tetraacetic acid (EDTA) as taught by Mathews” *Id.*

Applicants respectfully traverse for at least the reason that the Examiner has not made a prima facie showing of obviousness. In order to establish a prima facie case of obviousness, the Examiner must show, among other things, that the references teach or suggest all of the claim limitations. See M.P.E.P. § 2143. As discussed above, *Helioff* does not teach or disclose all of the claimed elements of claim 1.

Mathews cannot remedy the deficiencies of *Helioff* already demonstrated, and thus, a prima facie case of obviousness has not been established. Accordingly, this rejection is in error and Applicants request its withdrawal.

D. Claim 28

The Examiner rejects claim 28 under 35 U.S.C. § 103(a) “as being unpatentable over *Helioff* . . . in view of Pyles et al.” (U.S. Publication No. US2001/0008630 A1) (“*Pyles*”). Office Action at 7. The Examiner admits that *Helioff* “does not teach or disclose the species monosodium glutamate as claimed.” *Id.* Thus the Examiner cites *Pyles* as “in other analogous art of hair treating formulation, [and] teaches a composition comprising sodium glutamate as claimed.” *Id.* (citing *Pyles* at col. 3, lines 65-67). The Examiner concludes that “in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the primary reference of *Helioff* . . . by incorporating the amino acid salt of sodium glutamate as taught by *Pyles*.” *Id.*

Applicants respectfully traverse for at least the reason that the Examiner has not made a prima facie showing of obviousness. In order to establish a prima facie case of obviousness, the Examiner must show, among other things, that the references teach or suggest all of the

claim limitations. See M.P.E.P. § 2143. As discussed above, *Helioff* does not teach or disclose all of the claimed elements of claim 1.

Pyles cannot remedy the deficiencies of *Helioff* already demonstrated, and thus, a prima facie case of obviousness has not been established. Accordingly, this rejection is in error and Applicants request its withdrawal.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests the reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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